

## **Facts about Nicotine Addiction**

- It is well documented that most smokers identify tobacco use as harmful and they express a desire to reduce or stop using it. Nearly 35 million of them want to quit each year.
- The cigarette is a very efficient and highly engineered drug delivery system.
- Nicotine activates brain circuitry that regulates feelings of pleasure; a key brain chemical involved is dopamine.
- Smoking produces a rapid distribution of nicotine to the brain, with drug levels peaking within 10 seconds of inhalation.
- The acute effects of nicotine dissipate quickly, as do the feelings of reward, and this causes the smoker to continue dosing to maintain the drugs pleasurable effects and prevents withdrawal.
- For many tobacco users, long-term brain changes induced by continued nicotine exposure result in addiction.

**(Source: National institute of Drug Abuse)**

## **Tobacco Companies Enhancement of Nicotine**

- Tobacco companies added ammonia to tobacco.
- The ammonia increases the nicotine potency of cigarettes by increasing the amount of nicotine contained in the vapor that the smoker inhales.
- Through genetic engineering companies have developed a tobacco strain with twice as much nicotine as it might otherwise have.
- Companies also have lowered sugar levels in tobacco, to increase the alkalinity which also increased the amount of nicotine available to smokers.

**(Source: CNN.com/USA)**

**(Other Tobacco Products and Electronic Cigarettes information on other side)**

## Other Tobacco Products

According to the *National Cancer Institute*, there is no safe form of tobacco.

**Smokeless Tobacco** (chewing tobacco and snus-spitless tobacco):

- Chemicals found in smokeless tobacco include polonium-210 (a radioactive element found in tobacco fertilizer).
- In users of smokeless tobacco, nicotine is absorbed through the mouth tissues directly into the blood, where it goes to the brain.
- Even after the tobacco is removed from the mouth, nicotine continues to be absorbed into the bloodstream. Also, the nicotine stays in the blood longer for users of smokeless tobacco than for smokers.

**Cigars:**

- Cigar smoke, like cigarette smoke, contains toxic and cancer-causing chemicals that are harmful to both smokers and nonsmokers.
- **A higher level of cancer-causing substances:** During the fermentation process for cigar tobacco, high concentrations of cancer-causing nitrosamines are produced. Nitrosamines are found at higher levels in cigar smoke than in cigarette smoke.
- **More tar:** For every gram of tobacco smoked, there is more cancer-causing tar in cigars than in cigarettes.
- **A higher level of toxins:** Cigar wrappers are less porous than cigarette wrappers. The nonporous cigar wrapper makes the burning of cigar tobacco less complete than the burning of cigarette tobacco. As a result, cigar smoke has higher concentrations of toxins than cigarette smoke.

**(Source: *National Cancer Institute* Fact Sheet)**

## Electronic Cigarettes (E-Cigarettes)

Electronic cigarettes (“e-cigarettes”) are devices, about the size of a regular cigarette. They operate by electronically vaporizing a solution that often contains nicotine, creating a mist which is then inhaled. E-cigarettes are available in various flavors and claimed strengths of nicotine cartridges.

The FDA’s Division of Pharmaceutical Analysis analyzed the ingredients in a small sample of cartridges from two leading brands of electronic cigarettes, and found that the tested products contained detectable levels of known carcinogens (chemicals that cause cancer) and toxic chemicals. **In one sample, the FDA detected diethylene glycol, a chemical used in antifreeze that is toxic to humans. In several other samples, the FDA detected carcinogens, including nitrosamines.**

Electronic cigarettes may appeal to youth because of their high-tech design, easy availability online or via mall kiosks, and the wide array of flavors of cartridges including chocolate and mint.

For more information about electronic cigarettes visit: <http://www.fda.gov> and search electronic cigarettes.

**(Source: Food and Drug Administration)**

Although, e-cigarette manufacturers are advertising that e-cigarettes can be used anywhere, many places have policies banning e-cigarettes, such as some work places, airlines, and other public places.

**(Facts about Nicotine Addiction on other side)**